Entomological News

AND

PROCEEDINGS

OF THE

ENTOMOLOGICAL SECTION

OF THE

Academy of Natural Sciences of Philadelphia.

VOLUME XIX, 1908.

EDITOR:
HENRY SKINNER, M.D.
PHILIP P. CALVERT, Ph.D., Associate Editor.

ADVISORY COMMITTEE:

EZRA T. CRESSON — HENRY L. VIERECK — J. A. G. REHN.
PHILIP LAURENT — WILLIAM J. FOX — H. W. WENZEL.

PHILADELPHIA:
ENTOMOLOGICAL ROOMS OF
THE ACADEMY OF NATURAL SCIENCES,
LOGAN SQUARE.

1908.

P. C. STOCKHAUSEN
PRINTER
53-55 N. 7TH ST., PHILA., PA.

INDEX TO VOLUME XIX.

(Notes and articles on geographical distribution are indexed under the names of the States or countries concerned, and *not* under the species listed therein, except in the case of new or redescribed forms. New generic and specific names are marked with a *.)

GENERAL SUBJECTS.

Academy of Natural Sciences of Phila., Entom. Section of 440
Alberta collecting in 85, 108
Altitude and distribution of species 347, 360
American Entomological Society 497
Angolan insects of economic or pathologic importance 26, 224
Arizona, collecting in 87
Association of County Entomologists of California ... 149
Asymmetrical insects 191
Breeding cages 496, 497
Brooklyn Entomological Society 84, 85, 142, 184, 238, 239, 347, 348, 439.
Bubonic plague, role of insects in transmitting 353, 380
Butterflies at ball 79
Card index system 188
Commensalism 497
Convergence in structure ... 441
Death of insects, causes of 189, 439.
Directory of Jesuit Naturalists 291
Disease, flies and human 384, 389 472.
Dryness and wingedness 122
Ear, removal of insects from the 317, 339
Editorials, 34, 78 140, 181, 233, 290 338, 384, 436, 492.
Eggs laid by insects, Number of 4, 383
Entomological Literature, 35, 79 182, 183, 291, 339, 385.
Entomological Society of America 78, 90, 493
Environment on colors, Effects of 87, 147, 340
Errata 183
Examining insects under compound miscroscope 139
External wing buds in larvae of holometabolous insects .. 136
Feldman Collecting Social, 46, 185, 186, 188, 240, 342, 343, 389, 494, 496.
Fighting moths with lights ... 387
Floor-boards, Insect injury to 494
Graduate School of Agriculture of N. Y., Entomology at 340
Happy Family of Bugologists (poem) 294
Harrisburg Natural History Association 236, 344, 345
Heink Entomological Club, 55, 89 237, 238, 346, 497, 498.
Household insect pests, Use of naphthaline against 496
Human fleas 353, 380, 435
Hybrids 88
Illustrations of insects, How to make 140
Inflation of larvae 9
Insectivorous bats, Economic value of 184
Insects as food for man 29, 31, 32
Journal of Economic Entomology 79
Kellogg's "Insect Stories" ... 385
Killing flies, Mixture for 389
Local lists of insects 492

Mexico, Insect-formed ooliths in 291
Mimicry, 46, 224, 228, 230, 344
Mollusks, Blow-flies in dead. 234
Mouse-flea, A new 435
Myasis in man 32
Nason collection 75
Newark Entomological Society, 86, 87, 88, 188, 189, 390, 392.
Numerical distribution of insects 324, 393
Obituary:
Ashmead, W. H. 397
Biolley, P. 394
Davis, C. A. 234
Finot, P. A. P. 396
Fletcher, J. 445
Johnson, W. G 242
Konow, F. W. 348
Mayr, G 396
Ridings, J. H. 242
Seib, S. H. M. 396
Snow F. H. 447
Thomas, J. 142
Ohio Lake Laboratory 292
Ooliths due to insects 291
Pacific Coast Entomological Society 499, 500
Paraffin sections attacked by insects 442
Parasites as cause of death of insects 189, 439
Personals:
Adams, C. F. 493
Baker, C. F. 386, 493
Barrett, O. W. 79
Bradley, J. C. 491
Busck, A. 322
Calvert, P. P. 183, 437
Cresson, E. T. 289
Cresson, E. T., Jr. ... 55
Daecke, E. 322
Fenyes, A. 493
Ferdinand, King 407
Fernald, C. H. 386
Froggatt, W. 234
Fullaway, D. T 407
Grinnell, F., Jr. 491
Hammar, A. G. 493
Haseman, L. 493
Hebard, M. 182
Herrick, G. W..... 493
Hinds, W. E. 41
Holland, W. J. 386
Howard, C. W 493
Jarvis, C. 493
Kellogg, V L. 183
Kincaid, T. 130
Laurent, P. 340
McCook, H. C. ...141, 382
Mitchell, E. G. 202
Montgomery, T. H., Jr 234
Nelson, J. A. 493
Patch, E. M. 234
Poulton, E. B. 493
Quayle, H. J. 289
Rehn, J. A. G. 182
Rivera, M. J. 234
Shull, A. F. 493
Slingerland, M. V. ... 234
Smith, J. B 141, 492
Van Duzee, E. P. 234
Van Duzee, M. C 234
Viereck, H. L. ..41, 404, 493
Wenzel, H. W. 183
Wheeler, W. M. ...311, 386
Pitcher plant insects 150
Plants attacked by insects:
Acer 104, 131, 485
Alder 484
Alnus 484
Ampelopsis 143
Apple 101, 142
Astragalus 481, 483
Bean 230
Blackberry 212
Bladdernut 488
Boneset 168

Brassica 314
Catalpa 197
Cat-tail rush 295
Celtis 368
Cherry 142
Chestnut 101
Chrysanthemum 261
Cotton 210
Crinkle-root 142
Cucumber 227
Dentaria 142, 314
Eupatorium 168
Grass 438
Grenadilla 229
Hackberry 368
Hickory 118, 119, 241
Honey locust 119
Iron-weed 166
Jacobinia 211
Live oak 13, 77
Lotus 481, 483
Lupinus 481, 483
Malus 101
Maple 104, 131, 241, 485
Melon 227
Onion 234
Papaya 229
Passiflora 229
Pinus 390
Pitcher-plants 150
Poplar 1
Populus 1, 69, 103
Potato 230
Prunus 142
Quercus, 13, 77, 105, 106, 119, 349.
Salix 69, 102
Salvia 383
Sarracenia 150
Shade trees 84, 238
Staphylea 488
Thoroughwort 168
Timber trees, African.. 28, 228, 229.
Typha 295
Vernonia 166
Virginia creeper 143
Walnut 118, 119
Willow ..102, 118, 142, 443
Poisonous insects 467
Pollination by insects 153
Popular fallacies regarding insects 467
Publications of the Bureau of Entomology 183
Rat fleas 353, 380
Relaxing single parts of dried insects 139
Scapanus, Flea from 452
Setting board, Peat 495
Size of copulating insects, Relative 188, 240
Smell in mosquitos, Sense of 81
Specialists willing to determine insects 42
Squirrel flea 462
Stereoscopic pictures of insects 442
University of Illinois, Entomology at 338
Warning against unscrupulous dealers 337
Wings for lantern slides 83

ARACHNIDA.

americana, Tumidalvus* 244
Angola, A. of..... 27
Blood-sucking ticks 27
flavus, Phthiracarus* 450
Illinois, Acarina of 245, 451
moubata, Ornithodoros 27
Poisonous spiders 469
rotundus, Phthiracarus* 451
*Tumidalvus** 243

COLEOPTERA.

Acid-ejecting C. 229
Alabama, C. of 163
Angola, C. of, 26, 28, 31, 224, 226-230.
antaeus, Strategus ...286, 390, 461

Aleocharinae of U. S. and Canada 56
Aquatic C., How to collect and mount 392, 393
Arizona, C. of, 161, 163, 188, 241, 320.
Arrow-poison from C. 229
California, C. of, 66, 160, 499, 500
Chariessa 70
Cicindela, Distribution of by altitudes 360
Cicindela, Parasite of 91
Coccinellid eggs, Aphid feeding on 132
*davisi**, *Hister* 318
Diamphidia 229
*ferrisi**, *Agrilus* 368
ferrugineus, *Bradycinetus* 459
*fieldii**, *Thyce* 160
Florida, C. of 187, 428
*fuscula**, *Polyphylla* 161
Geotrupes 288
Horn-Roeschke School 38
Injurious C., 26, 28, 224, 226-8, 230
lazarus, *Bolboceras* 460
*lenta**, *Lachnosterna* 162
Listrochelus 164, 319
*lobata**, *Lachnosterna* 163
Long Island, C. of.....84, 348
Massachusetts, C. of 114, 217
Megilla feeding on aphids ... 132
Megilla, Parasites of 202
Necrophorus 120
New Jersey, C. of, 187, 241, 318, 319, 343, 390, 392, 494, 495.
New York, C. of 84, 348, 399
niger, *Sandalus* 288
North Carolina, C. of 286, 360, 459
*obliquefasciata**, *Pyrota* 320
ochrea, *Macrobasis* 240
Ohio, C. of 368, 386, 389
orbicollis, *Necrophorus* 120
Pachybrachys 216
Pennsylvania, C. of 325, 343, 390 495, 496.
silicea, *Diplognatha* 26
splendens, *Strategus* 461
Strategus 286, 390, 461
Stridulation in *Necrophorus* . 120
*tarsalis**, *Listrochelus* 319
Tennessee, C. of 217
*texana**, *Chariessa* 72
Texas, C. of 202, 217

DIPTERA.

acutus, *Ceratophyllus* 462
aenia, *Chaetopsis* 298
anale, *Spogostylum* 91
Angola, D. of, 26, 28, 30-32, 224 227-8.
*arcuatus**, *Rhypholophus* 201
Argyrophylax 236
Arizona, D. of 178
Bibio 76
Blood-sucking D. of Angola, 225 227, 228.
*brevicornis**, *Pachyrhina* 178
California, D. of, 7-9, 176, 178, 202, 380, 437, 452.
*californica**, *Pachyrhina* 176
Canada, D. of 9
Calliphora 234
Ceromasia 298
chrysocoma, *Goniops* 464
Colorado, D. of 9, 272
*cornutus**, *Rhypholophus* 202
*Corypsylla** 452
Culex 4, 22, 30, 46, 81, 473
Culicidae, classification of 28, 30
*Dicranomyia** 5, 406
dissidens, *Oscinis* 274
*divexus**, *Rhypholophus* 201
*domestica**, *Psychoda* ...282, 285
Eggs of *Culex*, Number of .. 4
*flavescens**, *Oscinis* 272
Flea feeds, How a 462
Fleas in transmission of bubonic plague, Role of ..353, 380
Floor maggot 31
floridica, *Psychoda* 276

foliora, Cecidomyia* 350
frontalis, Oscinis* 273
Glossina 26, 42
Guiana, D. of Dutch..... 95
House-flies as disease-carriers 384, 389, 472
House-fly, Possibility of exterminating 345
Idaho, D. of 98
longicornus, Rhypholophus* .. 201
luteola, Auchmeromyia..... 31
Maryland, D. of 496
Massachusetts, D. of 9, 349
Michigan, D. of 179
Missouri, D. of 274, 285
Montana, D. of 178
"Mosquito Life," Mitchell's.. 37
Nevada, D. of 178
New Hampshire, D. of 9
New Jersey, D. of 22, 46, 390, 441, 443, 473.
New York, D. of 201, 202
niger, Ceratophyllus* 434
nigra, Oscinis* 272
nocturnala, Psychoda 277, 279
North Carolina, D. of 168
obscuricornis, Melieria 98
occidentalis, Pachyrhina* 177
ornatus, Corypsylla* 452
Oscinis 272
Oviposition of *Bibio albipennis* 76
Pachyrhina 173, 405
palposa, Zeugma* 96
parallelus, Rhypholophus* ... 202
Parasitic D. 91, 235, 298
penetrans, Sarcopsylla 224
Pennsylvania, D of, 9, 187, 241, 336, 344, 345, 390, 464, 495 496.
perturbans, Culex 473
Proctacanthus catching *Bombus* 440
Psychoda 275
Rhypholophus 200
Sarcophaga pollinating *Sarracenia* 155
serpentina, Anastrepa 98
simplex, Heptaphlebomyia ... 28
Smell in mosquitos, Sense of 81
snowii, Pachyrhina* 176
Stomoxys as a plague transmitter 358
Tabanidae of Angola 228
Tabanidae of North Carolina 168
Texas, D. of 235, 273, 274
Tipula larvae, Outbreak of ... 437
Tipulidae, Variations in 405
trifasciata, Ortalis 298
Tse-tse fly 27, 42
tuberosa, Xanthacrona* 97
Washington, D. of 7, 9, 178, 201, 202.
Wyoming, D of 177
*Zeugma** 95

HEMIPTERA.

ancylus, Aspidiotus 309
Angola, H. of 27, 229
Aphid feeding on Coccinellid eggs 132
Aphididae 1
Aphididae, Parasites of 365
Arizona, H. of 234
Aspidiotus 309
bicoloripes, Phonergates 27
Chaitophorus 131
circularis, Aspidiotus 309
citri, Pseudococcus 383
Colorado, H. of 1
Corixa?, Ooliths formed from eggs of 292
Florida, H. of 424
folsomii, Aphis* 143
gossypii, Contarinia* 210
Illinois, H. of 143
Life-cycle of *Pemphigus* 484
Maine, H. of 484
Minnesota, H. of 131
New Jersey, H. of 443

Pemphigus 484
Pennsylvania, H. of 336
Poisonous H. 471
populi, Schizoneura* 1
rufomaculata, Aphis* 261
Saldoida 424
tessellata, Pemphigus 484
testudinatus, Chaitophorus ... 131
Van Duzee's "North American Membracidae" 291
West Indies, H. of.....210, 211
Winged Aphids, Production of 122, 484

HYMENOPTERA.

alpestris, Tachysphex foxii* 223
Andrena 42
Angolan H. 33, 226, 227, 228, 230
Ant with Aphids 144
Ants and *Saldoida* 427
Ants associated with pupae 497
americanus, Perilitus 202
Aphelinus 365
Apis 227
Army ants 226
Bembicidae 373
besseyae, Crabro* 419
Bombus 86
Bombus caught by Asilid 440
brachycarpae, Crabro* 252
capitalis, Scolioneura 212
Carpenter mudwasp 231
cockerelli, Crabro* 255
Colorado, H. of, 78, 220, 245, 367, 373, 418, 419.
Crabro 245, 258, 418, 419
crassus, Tachytes 224
Crematogaster 144
Delaware, H. of 212
deltaensis, Microbembex monodonta* 375
depressicauda, Nomada* 323
doanei, Megachile* 466
Dorylus 226
drymocallidus, Crabro* 255
eriogoni, Crabro* 256
ferrugineipes, Crabro* 250
fossor, Oxybelus* 179
foxii, Tachysphex* 222
gillettei, Crabro* 418
Headlee and Dean's "Mound-Building Prairie Ant", 385, 435
Helorimorpha 363
heraclei, Crabro* 253
hitei, Tachysphex* 221
Indiana, H. of 299
larimerensis, Belomicrus* ... 417
Light, *Vespa crabro,* attracted to 86
lineolata, Crematogaster 144
Massachusetts, H. of 363
megacephalus, Crabro* 249
melanderi, Helorimorpha* ... 363
meliloti, Bembidula* 376
Mellinus 299
Mexico, H. of 387
militaris, Polyrachis 33
modestum, Rhopalum* 257
Nebraska, H. of 420
neomexicana, Microbembex monodonta* 375
New Jersey, H. of..... 86
New Mexico, H. of, 179, 245, 375, 377, 379.
nigrescens, Tachysphex* 220
nigritarum, Apis 227
nigritus, Aphelinus* 367
nokomis, Crabro* 251
Nomada 323
occidentalis, Microbembex monodonta* 375
operus, Crabro* 247
opwana, Crabro* 248
Oxybelus 179
Parasitic H., 199, 202, 216, 365, 391, 439.
Pennsylvania, H. of 323, 333
Pheidole 230
Polistes 107, 387

Preoccupied names in *Andrena* 42
primaestate, Bembex* 378
pruinosa, Tapinoma 154
quadridens, Monobia 231
Rhopalum 258
Salius 228
Schmiedeknecht's "Die Hymenopteren Mitteleuropas". 182
secunda, Ichneutidea* 419
semiflavus, Aphelinus* 367
skinneri, Nomada* 323
Sleeping habit of a bee 340
South Carolina, H. of 367
Tachysphex 220
Tahiti, Bees of 466
Tapinoma 154
Termite-feeding ant 33
Texas, H. of 202, 375
townsendi, Oxybelus* 180
Virginia, H. of 323, 436
Winter, Male *Polistes* survive 107
wolcotti, Mellinus* 299

LEPIDOPTERA.

Aberrations of L., 89, 191, 239, 393, 498.
Aborted tails of *Laertias philenor* 85
agrifoliella, Lithocolletis* ... 105
ajax, Papilio 191
Alberta, L. of 108, 124
Altitude and distribution of L. 347
amicta, Natada 29
Angola, L. of 29
antiacis, Lycaena 476, 478
appassionata, Papaipema 150
arcuella, Lithocolletis* 107
Argynnis 108, 124
Arizona, L. of ...69, 77, 188, 263
astarte, Argynnis 108
asterias, Papilio 237
ausonides, Euchloe 204
Basilarchia 347, 348
bassiformis, Sesia 164
behrii, Lycaena 477, 482
British Columbia, L. of, 103, 124, 340.
Burns, collection of L. 404
Butterfly fakers 259
California, L. of, 13, 14, 43, 105, 149, 314, 317, 340, 476, 483.
cara, Catocala 116
carolina, Callosamia angulifera* var. 231
castoria, Pontia 314
catalpae, Ceratomia 197
catalpae, Darevmma 494
Catocala 47, 54, 115, 237
catskillata, Eupithecia* 192
Cocoons, Bunched 343
" Compound 89
" Hanging 41
Codling moth 11
Color of cocoons, due to environment 87
Colorado, L of ..43, 135, 263, 264
Columbia, L. of District of .. 79
conformata, Eupithecia* ..128, 195
Connecticut, L. of 47
cresphontes, Papilio 219
cyanosparsella, Eriocrania* .. 14
cynthia, Philosamia 391
daeckeana, Olethreutes 151
dejecta, Catocala 47
Diseases of L. 189, 439
Erebia 73, 341
Erebus, 83, 190, 260, 342, 444, 495
erpata, Eupithecia* 193
Eupithecia 128, 192, 196, 312
Fernald's "Genera of Tortricidae" 339
filmata, Eupithecia* 129, 195
fiscellaria, Therina 189
Florida, L. of 348, 388
gratulata, Mesoleuca 189
hirsuta, Papilio philenor* 149
Homoptera 13, 141

Hybrids of *Smerinthus* 88
Illinois, L. of 3, 346
indiana, Heliolonche* 423
Indiana, L. of.....421-423
ines, Thecla 69
Inflation of larvae 9
invictella, Recurvaria* 316
Iowa, L. of 369, 493
Java, L. of 293
kearfottella, Lithocolletis* ... 100
Lithocolletis 99
luteata, Eupithecia 196
Lycaena 476
Maine, L. of 152, 260, 321, 386
malimalifoliella, Lithocolletis* 101.
manitoba, Catocala* 54
Manitoba, L. of 55
Maryland, L. of 199, 402
Massachusetts, L. of 194, 260
meritata, Eupithecia* 195
mexicana, Terias 43, 135, 437
Mexico, L. of 497
Migrating butterflies ....218, 388, 437.
miserulata, Eupithecia 312
Missouri, L. of 89, 115, 237, 238, 437, 498.
monuste, Pieris 388
morenella, Gelechia* 317
multiscripta, Cerura 86
myrina, Brenthis 239
New Jersey, L. of 42, 84, 86, 100, 101, 102, 104, 186, 188, 239, 289, 344, 390, 391, 392, 409-417, 443, 494.
New York, L. of 129, 130, 142, 193, 194, 195, 238, 239, 347, 412, 415, 417.
Nonagria 295
normani, Crocigrapha 321
nymphulalis, Blepharomastix* 263
oblonga, Nonagria 295
obsoleta, Limenitis 69
occidentalis, Blepharomastix*. 263
ochralis, Symphysa* 263
odora, Erebus 83, 190, 342
odoratus, Erebus 260, 444, 495
Ohio, L. of.....106, 263
oslarellus, Crambus* 264
palpata, Eupithecia 196
pamina, Hyperchiria 87
Pamphila, Early stages of.... 408
Papilio 191, 219, 237, 391, 393
parallela, Archips..... 152
Pennsylvania, L. of 142, 164, 186, 194, 195, 239, 295, 316, 328, 333, 343, 409-417, 444, 495, 496, 497
pheres, Lycaena 483
philodice, Colias 239
plagalis, Pyrausta insequalis* 263.
platanoidiella, Lithocolletis* .. 106
plexippus, Anosia 218, 437
polyphemus, Telea 13, 141, 393
Pupae associated with ants.. 497
pyralidiformis, Sesia 166
rubra, Samia 340
saccharella, Lithocolletis* 104
salicivorella, Lithocolletis* .. 101
Saturniidae, Causes of death of 189, 439
schuylkillensis, Plagodis* 315
Sesia 3, 164
sexta, Phlegethontius 235
skinneri, Anisota* 77
South Carolina, L. of....150, 231
Strecker collection 404
Texas, L. of.....190, 197, 235
titan, Sesia 3
tityrus, Eudamus 191
tremuloidiella, Lithocolletis*. 102
trinotella, Lithocolletis* 99
troilus, Papilio 219
unijuga, Catocala 115
Variation in L., 89, 189, 191, 237, 239, 391, 393.
Virginia, L. of.....107, 199
Wisconsin, L. of 83
xerces, Lycaena 476, 478

NEUROPTERA.

Aeshna 264, 301
Aeshninae, Key to wings of.. 456
americana, Halter 34
Arizona, Odonata of 45, 235
California, N. of 204
Chauliodes 133
clara, Oliarces* 203
Collecting Odonata, Device for 390
Colorado, N. of 455
Cordulinae, Revision of..... 428
Fossil Dragonfly 455
Indiana, Odonata of, 302, 305, 306
jalapensis, Aeshna* 264, 307
Massachusetts, Odonata of.. 302
Mexico, Odonata of.....307, 440
Missouri, N. of..... 437
multicolor, Aeshna 264, 301
mutata, Aeshna 264, 301
Neuronia 134
New Jersey, N. of, 440, 441, 443, 444.
North Carolina, N. of, 50, 133, 134, 443.
Oklahoma, Odonata of..... 433
*Oliarces** 203
Panorpidae of North Carolina 50
Pennsylvania, N. of, 335, 337, 444
*Platycordulia** 431
Scorpion-flies 50
solida, Aeshna 458
Virginia, Odonata of..... 384
Winds and Odonate Distribution 442
xanthosoma, Platycordulia* .. 432

ORTHOPTERA.

Acrididae, Morse on American 35
Alberta, O. of..... 444
Anabrus 44
Angola, O. of.....29, 30, 32
Arizona, O. of..... 463
California, O. of..... 158
carolinensis, Camptonotus 488
chlorium, Cyrtophyllicus* 158
Colorado, O. of..... 126
Convergence in Acrididae.... 441
Crickets as food..... 29
*Cyrtophyllicus** 156
Florida, O. of..... 441
Fossil O. 126
Leaf-roller, Orthopterous 488
maculata, Palaeorehnia* 126
Maryland, O. of..... 488
membranaceus, Brachytrypus. 29
Migratory locust 30
muticus, Anurogryllus 461
New Jersey, O. of..... 444
North Carolina, O. of..... 16
Novel means to destroy grasshoppers 439
*Palaeorehnia** 126
Peculiar food of grasshopper. 498
Pennsylvania, O. of..... 327
peregrinatoria, Schistocerca .. 30
wellmani, Dacnodes 32

AUTHORS.

Banks, N. 203, 340, 384
Bessey, E. A. 388
Beutenmüller, W. 54
Biederman, C. R. 77
Blaisdell, F. E. 499, 500
Bowditch, F. C. 216
Bradley, J. C. 94
Braun, A. F. 99
Brimley, C. S. ...16, 107, 134, 168
Brues, C. T. 182, 363
Busck, A. 316
Calvert, P. P. 45, 83, 233, 235, 308 and Index.
Casey, T. L. 41
Caudell, A. N. 45, 463
Cockerell, T. D. A., 126, 179, 211, 234, 323, 455, 466.
Cockle, J. W. 341
Cooley, R. A. 139
Coolidge, K. R., 13, 66, 73, 135, 204, 314, 342.

Cresson, E. T., Jr. 95
Davis, J. J. 143, 383
Davis, W. T. 42
Doane, R. W., 5, 173, 200, 405, 438
Dod, F. H. W. 108, 124
Dow, R. P. 239, 348, 440
Dury, C. 368, 386, 389
Easton, N. S. 114
Ely, C. R. 47, 79
Engel, H. 164
Englehardt, G. P. 85, 142, 185
Ewing, H. E. 243, 449
Fall, H. C. 159
Felt, E. P. 210
Fenyes, A. 56
Fernald, C. H. 260
Fox, C. 434, 452
Freedley, W. G., Jr. 289, 293
Gillette, C. P. 1
Girault, A. A., 4, 76, 132, 197, 202, 236, 383.
Greene, G. M. 241
Grossbeck, J. A., 87, 88, 89, 189, 190, 315, 392, 393, 473.
Haimbach, F., 46, 186, 187, 188, 263, 343, 344, 390, 443, 496.
Hancock, J. L. 396
Headlee, T. J. 435
Hebard, M. 156
Holmes, F. M. 493
Hooker, C. W. 349
Horn, W. 235
Houghton, C. O. 120, 212, 399
Howard, L. O. 365
Hungate, J. W. 234
Jones, F. M. 150, 231
Knetzger, A., 55, 89, 237, 238, 337, 347, 437, 498.
Kunze, R. E. 69
Kwiat, A. 420
Laurent, P. 408
Manee, A. H. 286, 459
Marlatt, C. L. 309
McAtee, W. L. 488
McClung, C. E. 449
Melander, A. L. 11
Merrick, F. A. 9
Mitzmain, M. B. 353, 380, 462
Morris, E. L. 149
Newcomer, E. J. 204, 314
Patch, E. M. 321, 484
Paxson, O. S. 324
Pearsall, R. F.....128, 192, 312
Pergande, T. 294
Plitt, E. A. 402
Porter, A. F. 369
Rehn, J. A. G. 37, 395
Riley, W. A. 136
Rohwer, S. A., 43, 78, 179, 220, 245, 373, 417.
Rowley, R. R. 115
Russell, H. M. 349
Russell, J. 141
Saverner, P. A. 218
Schaeffer, C. 318
Sherman, F., Jr. 50, 168
Skinner, H., 34, 44, 78, 140, 149, 181, 290, 338, 384, 385, 397, 436, 440-444, 445, 492, 497.
Slosson, A. T. 424
Smith, H. S. 299
Smith, J. B. 13, 22
Smyth, E. A., Jr. 191
Snyder, A. J. 3
Snyder, H. A. 147
Swett, L. W. 196
Tandy, M. 231
Tucker, E. S. 272
Viereck, H. L. 38, 42
Walton, W. R., 237, 295, 345, 464, 467.
Was, E. 83
Webb, J. G. 82
Wellman, F. C. 26, 224
Williams, F. X. 14, 476
Williamson, E. B. ..264, 301, 428
Wilson, H. F. 261
Wolcott, A. B. 70
Wood, W. C. 386
Woodworth, C. W. 122
Wright, J. D. E. 66
Wright, W. S. 44